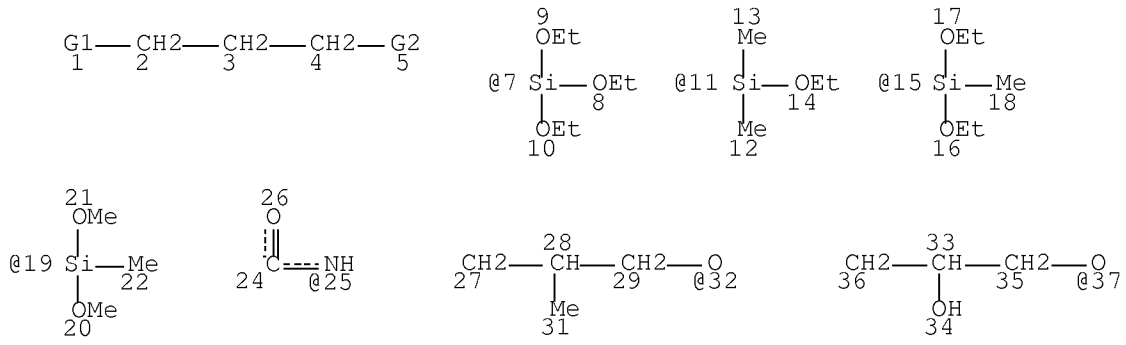
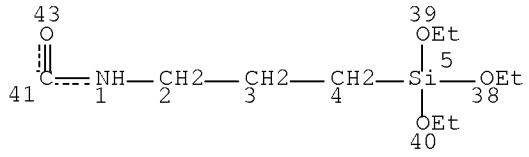
```
=> fil reg
FILE 'REGISTRY' ENTERED AT 08:54:37 ON 05 AUG 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    4 AUG 2008  HIGHEST RN 1038507-75-3
DICTIONARY FILE UPDATES:   4 AUG 2008  HIGHEST RN 1038507-75-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> d sta que l30
L22             STR
```



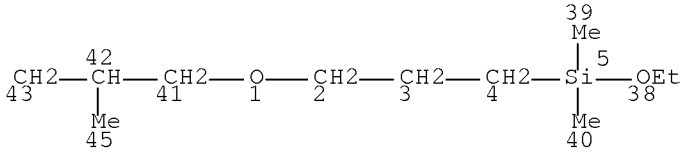

```
VAR G1=25/32/37
VAR G2=7/11/15/19
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  34

STEREO ATTRIBUTES: NONE
L23             SCR 2043
L25         930 SEA FILE=REGISTRY SSS FUL L22 AND L23
L26             STR
```



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

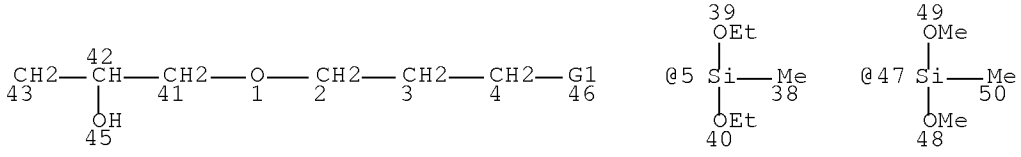
STEREO ATTRIBUTES: NONE
L27 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L28 STR



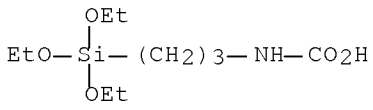
VAR G1=5/47
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17

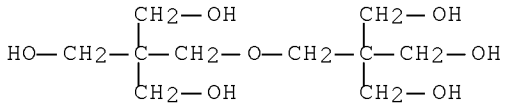
STEREO ATTRIBUTES: NONE
L30 864 SEA FILE=REGISTRY SUB=L25 SSS FUL (L26 OR L27 OR L28)

100.0% PROCESSED 914 ITERATIONS 864 ANSWERS
SEARCH TIME: 00.00.07

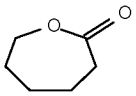
```
=> d ide can tot l66

L66  ANSWER 1 OF 17  REGISTRY  COPYRIGHT 2008 ACS on STN
RN   1013932-77-8  REGISTRY
ED   Entered STN:  13 Apr 2008
CN   2-Oxepanone, homopolymer, ester with 2,2'-[oxybis(methylene)]bis[2-
     (hydroxymethyl)-1,3-propanediol] (6:1), hexakis[N-[3-
     (triethoxysilyl)propyl]carbamate]  (CA INDEX NAME)
MF   C10 H23 N O5 Si . 1/6 C10 H22 O7 . (C6 H10 O2)x
PCT  Polyester, Polyester formed
SR   CA
LC   STN Files:   CA, CAPLUS

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

     CM   1

     CRN  140236-86-8
     CMF  C10 H23 N O5 Si
```



```
     CM   2

     CRN  126-58-9
     CMF  C10 H22 O7
```



```
     CM   3

     CRN  24980-41-4
     CMF  (C6 H10 O2)x
     CCI  PMS

          CM   4

          CRN  502-44-3
          CMF  C6 H10 O2
```



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

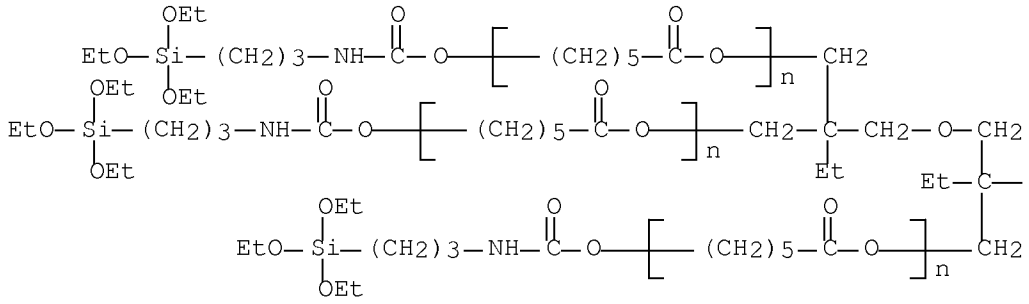
REFERENCE 1: 148:380362

L66 ANSWER 2 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 945755-96-4 REGISTRY
ED Entered STN: 29 Aug 2007
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1), polymer with triethoxymethylsilane (CA INDEX NAME)
MF (C7 H18 O3 Si . (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C52 H110 N4 O21 Si4)x
CI PMS
PCT Polyester, Polyether
SR CA
LC STN Files: CA, CAPLUS

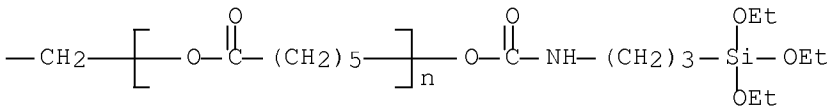
CM 1

CRN 816457-20-2
CMF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C52 H110 N4 O21 Si4
CCI PMS

PAGE 1-A

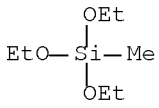


PAGE 1-B



CM 2

CRN 2031-67-6
CMF C7 H18 O3 Si



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

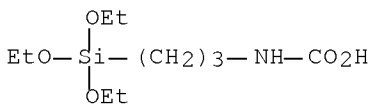
REFERENCE 1: 147:258557

L66 ANSWER 3 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 870100-44-0 REGISTRY
ED Entered STN: 16 Dec 2005
CN 2-Oxepanone, homopolymer, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1),tetrakis[[3-(triethoxysilyl)propyl]carbamate] (9CI) (CA INDEX NAME)
MF C12 H26 O5 . 4 C10 H23 N O5 Si . 4 (C6 H10 O2)x
PCT Polyester, Polyester formed
SR CA
LC STN Files: CA, CAPLUS

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

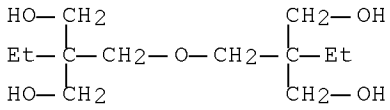
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 23235-61-2
CMF C12 H26 O5

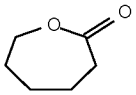


CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

CRN 502-44-3
CMF C6 H10 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

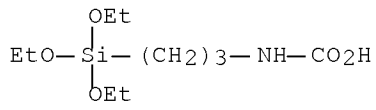
REFERENCE 1: 144:7444

L66 ANSWER 4 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 853904-58-2 REGISTRY
ED Entered STN: 06 Jul 2005
CN 2-Oxepanone, homopolymer, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), tetrakis[[3-(triethoxysilyl)propyl]carbamate] (9CI) (CA INDEX NAME)
MF C10 H23 N O5 Si . (C6 H10 O2)x . 1/4 C5 H12 O4
PCT Polyester, Polyester formed
SR CA
LC STN Files: CA, CAPLUS

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

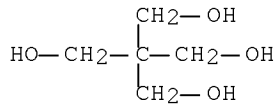
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 115-77-5
CMF C5 H12 O4

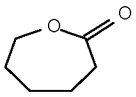


CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

CRN 502-44-3
CMF C6 H10 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

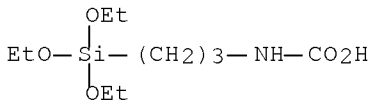
REFERENCE 1: 143:60335

L66 ANSWER 5 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 853904-54-8 REGISTRY
ED Entered STN: 06 Jul 2005
CN 2-Oxepanone, homopolymer, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), tris[[3-(triethoxysilyl)propyl]carbamate] (9CI) (CA INDEX NAME)
MF C10 H23 N O5 Si . 1/3 C6 H14 O3 . (C6 H10 O2)x
PCT Polyester, Polyester formed
SR CA
LC STN Files: CA, CAPLUS

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

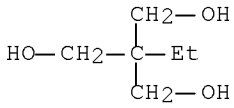
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 77-99-6
CMF C6 H14 O3

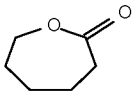


CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

CRN 502-44-3
CMF C6 H10 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

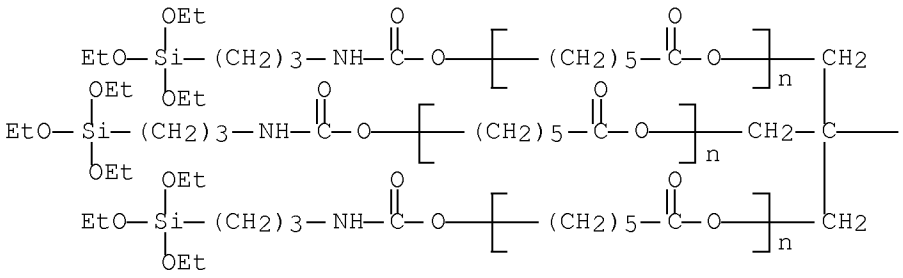
REFERENCE 1: 143:60335

L66 ANSWER 6 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 853879-44-4 REGISTRY
ED Entered STN: 05 Jul 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C45 H96 N4 O20 Si4
CI PMS

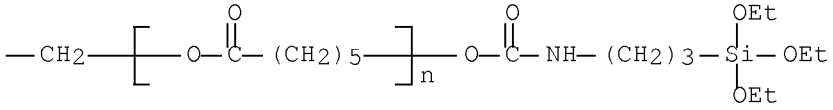
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

PAGE 1-A



PAGE 1-B



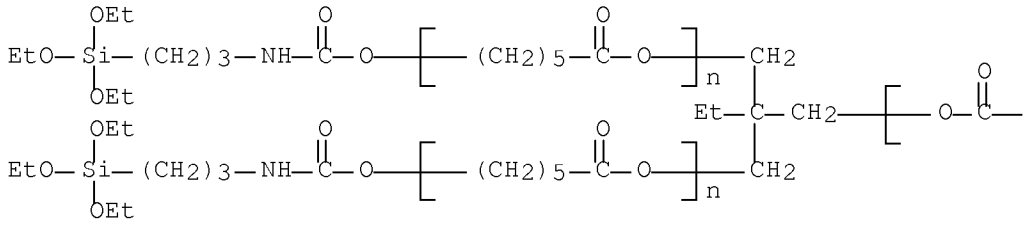
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 143:60335

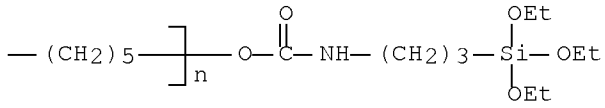
L66 ANSWER 7 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 853879-43-3 REGISTRY
ED Entered STN: 05 Jul 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C36 H77 N3 O15 Si3
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

PAGE 1-A



PAGE 1-B

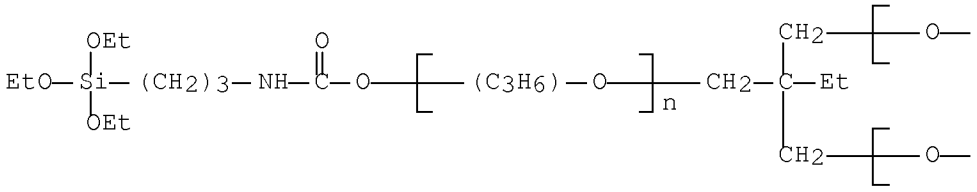


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

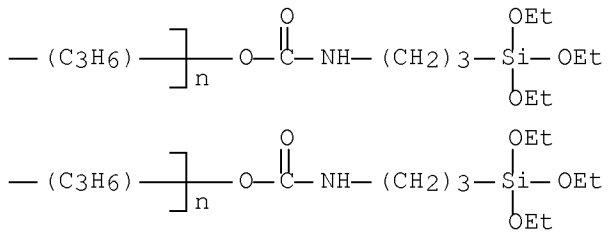
REFERENCE 1: 143:60335

L66 ANSWER 8 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 851852-18-1 REGISTRY
ED Entered STN: 08 Jun 2005
CN Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)
MF (C3 H6 O)n (C3 H6 O)n (C3 H6 O)n C36 H77 N3 O15 Si3
CI IDS, PMS
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS

PAGE 1-A



PAGE 1-B

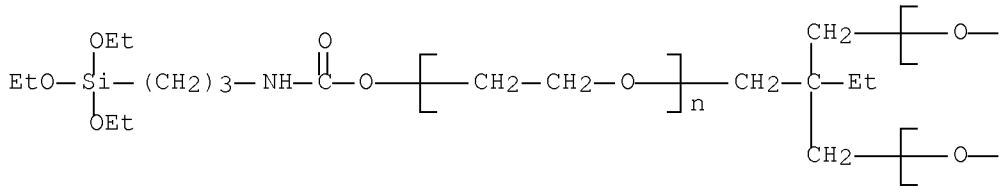


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

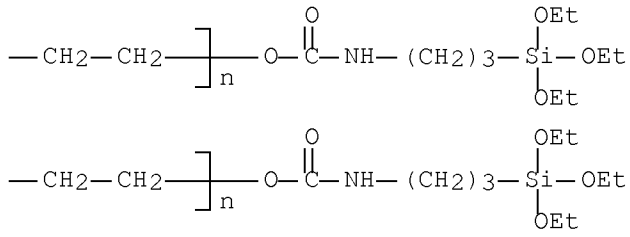
REFERENCE 1: 142:490130

L66 ANSWER 9 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 848841-96-3 REGISTRY
ED Entered STN: 20 Apr 2005
CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)
MF (C2 H4 O)n (C2 H4 O)n (C2 H4 O)n C36 H77 N3 O15 Si3
CI PMS
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

PAGE 1-A



PAGE 1-B

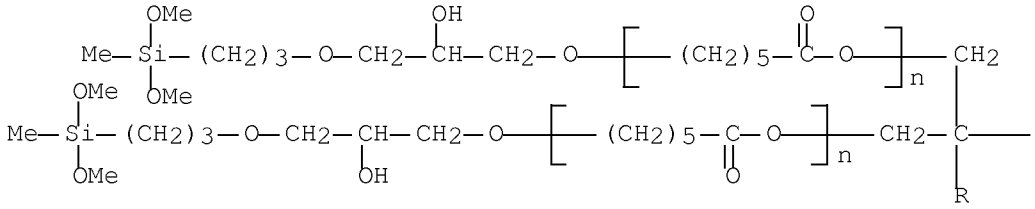


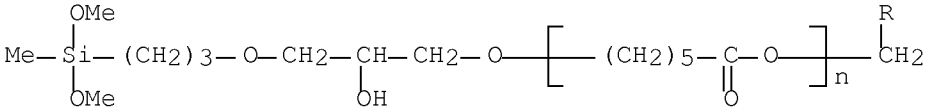
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:356293

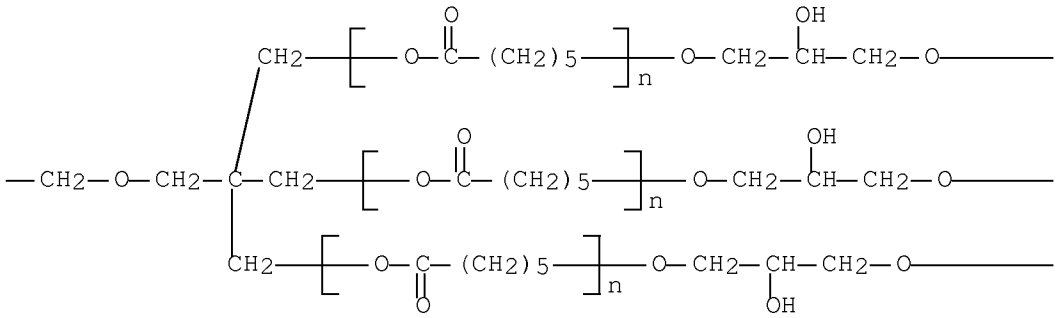
L66 ANSWER 10 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 846014-06-0 REGISTRY
ED Entered STN: 21 Mar 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(dimethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C64 H142 O31 Si6
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

PAGE 1-A

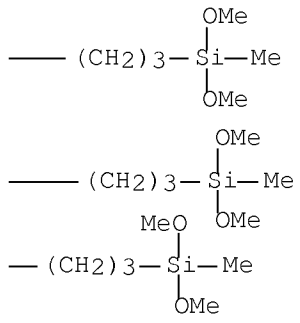




PAGE 1-B



PAGE 1-C

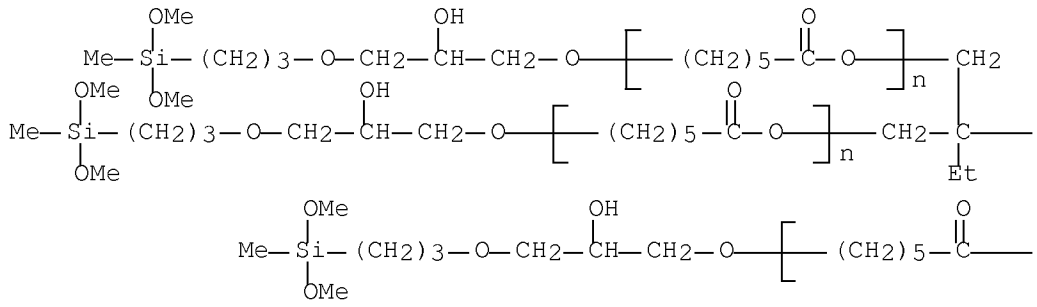


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

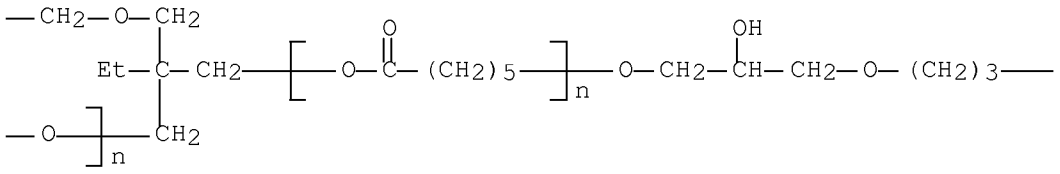
REFERENCE 1: 142:262689

L66 ANSWER 11 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 846014-04-8 REGISTRY
ED Entered STN: 21 Mar 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(dimethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C48 H106 O21 Si4
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

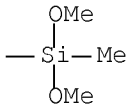
PAGE 1-A



PAGE 1-B



PAGE 1-C

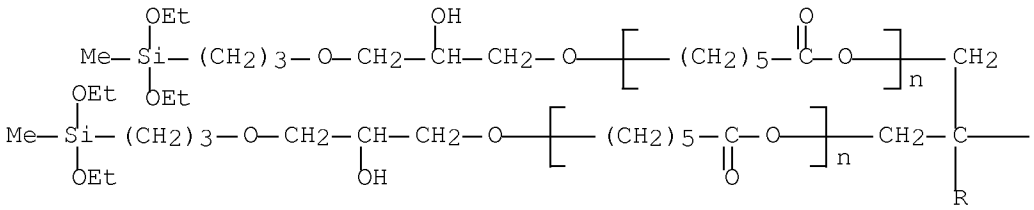


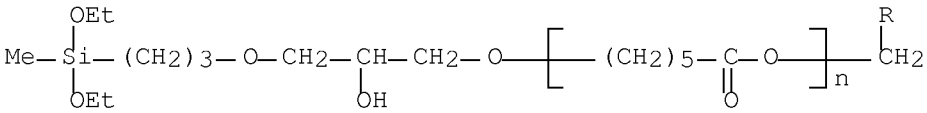
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:262689

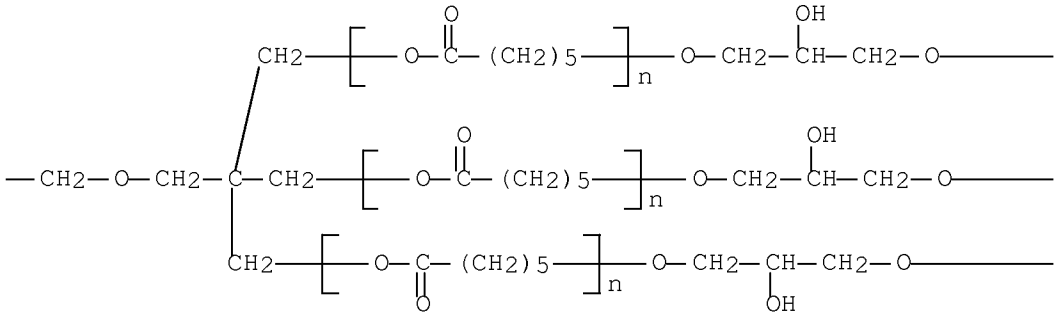
L66 ANSWER 12 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 846014-02-6 REGISTRY
ED Entered STN: 21 Mar 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(diethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C76 H166 O31 Si6
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

PAGE 1-A

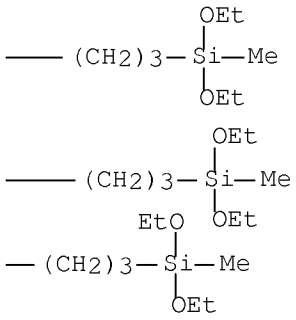




PAGE 1-B



PAGE 1-C

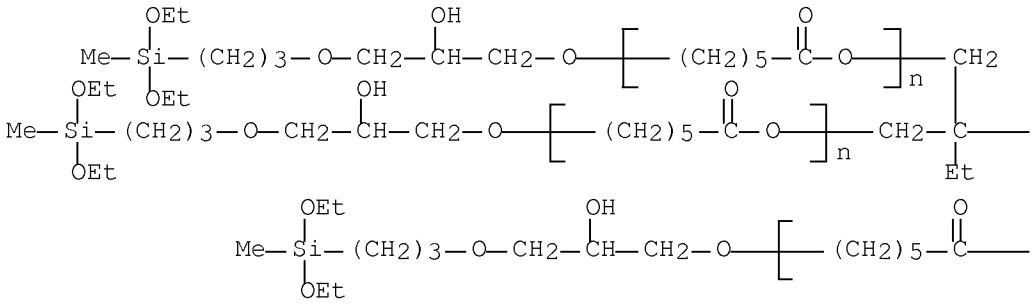


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

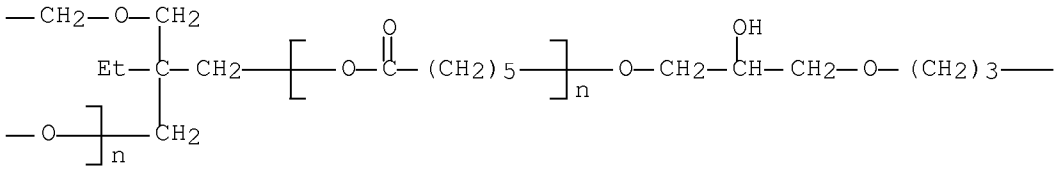
REFERENCE 1: 142:262689

L66 ANSWER 13 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 846014-00-4 REGISTRY
ED Entered STN: 21 Mar 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(diethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C56 H122 O21 Si4
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

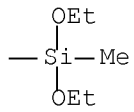
PAGE 1-A



PAGE 1-B



PAGE 1-C

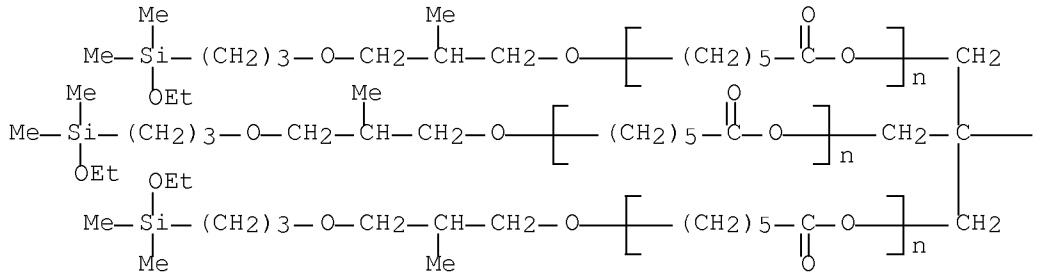


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

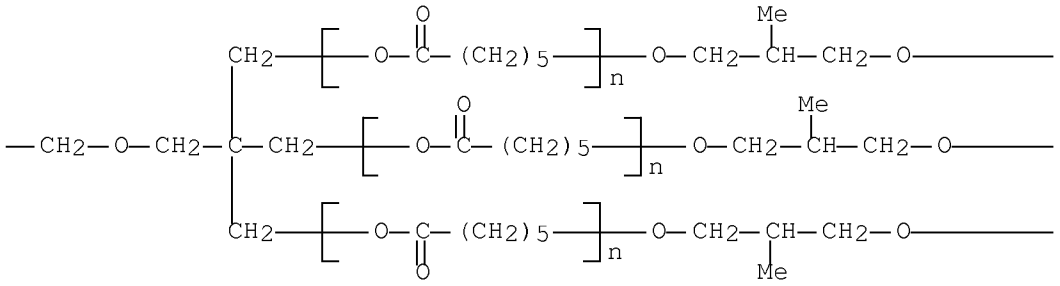
REFERENCE 1: 142:262689

L66 ANSWER 14 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 846013-98-7 REGISTRY
ED Entered STN: 21 Mar 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(ethoxydimethylsilyl)propoxy]-2-methylpropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C76 H166 O19 Si6
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

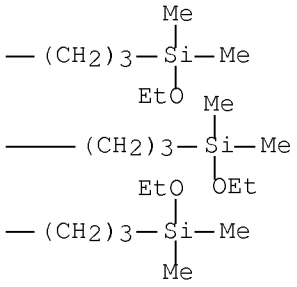
PAGE 1-A



PAGE 1-B



PAGE 1-C

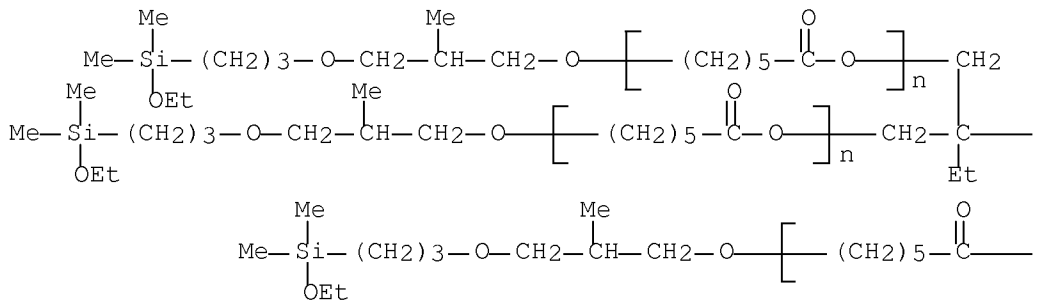


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

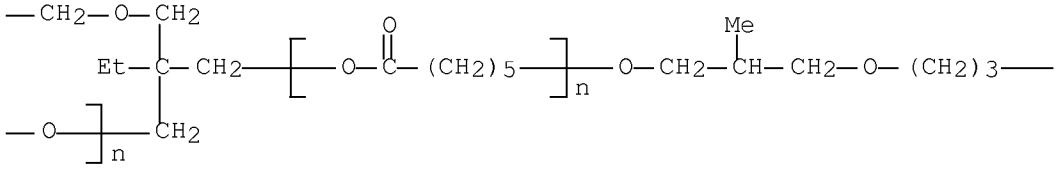
REFERENCE 1: 142:262689

L66 ANSWER 15 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 846013-96-5 REGISTRY
ED Entered STN: 21 Mar 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(ethoxydimethylsilyl)propoxy]-2-methylpropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C56 H122 O13 Si4
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS

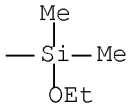
PAGE 1-A



PAGE 1-B



PAGE 1-C



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

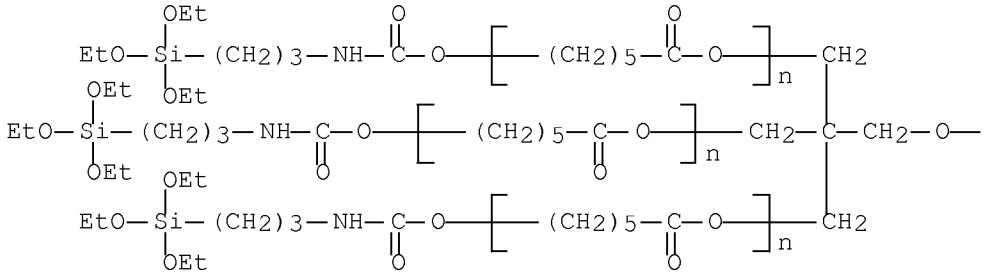
REFERENCE 1: 142:262689

L66 ANSWER 16 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 816457-23-5 REGISTRY
ED Entered STN: 19 Jan 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (CA INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6

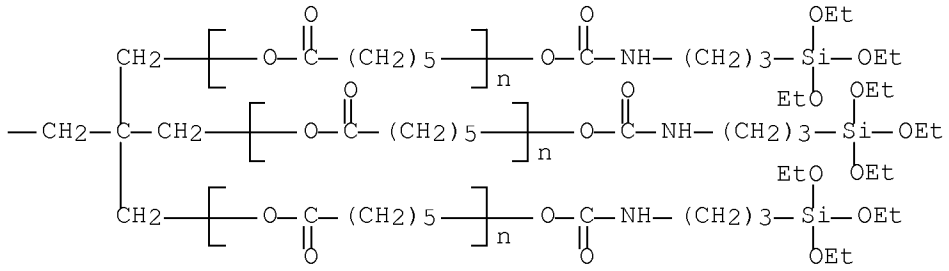
H10 O2)n C70 H148 N6 O31 Si6
CI PMS
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

PAGE 1-A



PAGE 1-B



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 148:380362

REFERENCE 2: 142:491335

REFERENCE 3: 142:262689

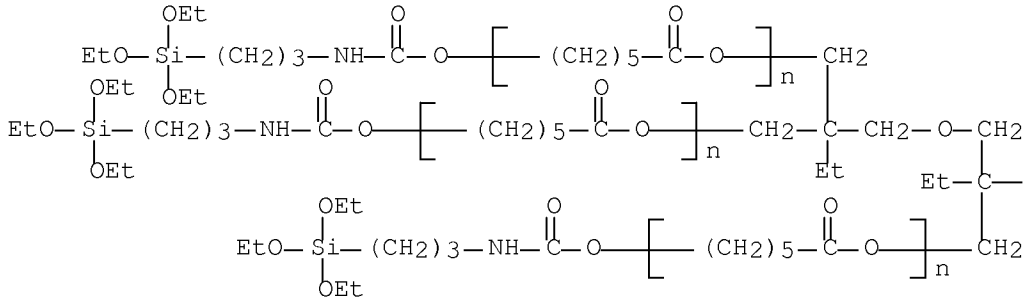
REFERENCE 4: 142:105484

L66 ANSWER 17 OF 17 REGISTRY COPYRIGHT 2008 ACS on STN
RN 816457-20-2 REGISTRY
ED Entered STN: 19 Jan 2005
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA

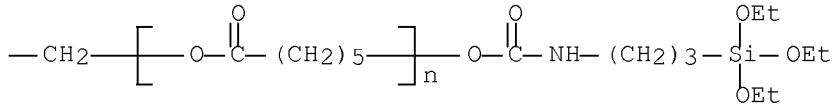
INDEX NAME)
MF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C52 H110 N4 O21 Si4
CI PMS, COM
PCT Polyester
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

**RELATED POLYMERS AVAILABLE WITH POLYLINK**

PAGE 1-A



PAGE 1-B



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 144:7444

REFERENCE 2: 142:262689

REFERENCE 3: 142:105484

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 08:54:54 ON 05 AUG 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 5 Aug 2008 VOL 149 ISS 6
FILE LAST UPDATED: 4 Aug 2008 (20080804/ED)

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

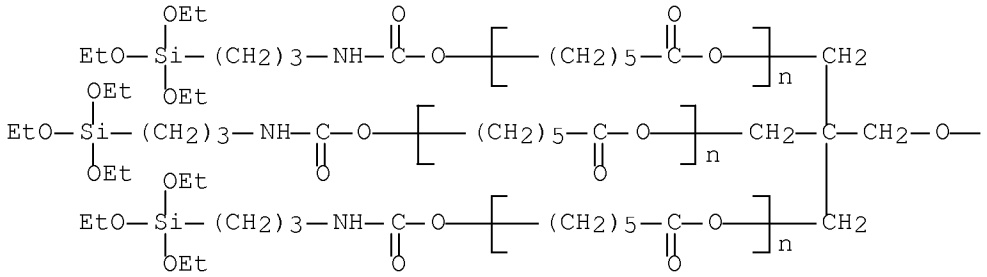
This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d l71 bib abs hitstr retable tot

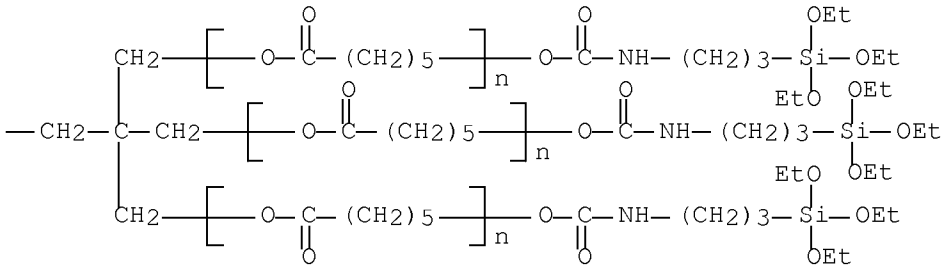
L71 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:487246 HCAPLUS Full-text
DN 148:380362
TI Synchrotron X-ray reflectivity studies of nanoporous organosilicate thin films with low dielectric constants
AU Oh, Weontae; Hwang, Yongtaek; Shin, Tae Joo; Lee, Byeongdu; Kim, Jong Seong; Yoon, Jinhwan; Brennan, Sean; Mehta, Apurva; Ree, Moonhor
CS Department of NanoTechnology, Dong-eui University, Pusan, 614-714, S. Korea
SO Journal of Applied Crystallography (2007), 40(S1), s626-s630
CODEN: JACGAR; ISSN: 0021-8898
PB Blackwell Publishing Ltd.
DT Journal
LA English
AB Quant., non-destructive X-ray reflectivity anal. using synchrotron radiation sources was successfully performed on nanoporous dielec. thin films prepared by thermal processing of blend films of a thermally curable polymethylsilsesquioxane dielec. precursor and a thermally labile triethoxysilyl-terminated six-arm poly(.vepsiln.-caprolactone) porogen in various compns. In addition, thermogravimetric anal. and transmission electron microscopy anal. were carried out. These measurements provided important structural information about the nanoporous films. The thermal process used in this study was found to cause the porogen mols. to undergo efficiently sacrificial thermal degradation, generating closed, spherical nanopores in the dielec. film. The resultant nanoporous films exhibited a homogeneous, well defined structure with a thin skin layer and low surface roughness. In particular, no skin layer was formed in the porous film imprinted using a porogen loading of 30 wt%. The film porosities ranged from 0 to 33.8% over the porogen loading range of 0-30 wt%.
IT 816457-23-5 1013932-77-8
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PROC (Process); USES (Uses)
(synchrotron X-ray reflectivity studies of nanoporous organosilicate thin films with low dielec. consts.)
RN 816457-23-5 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

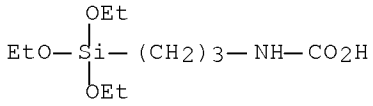


RN 1013932-77-8 HCAPLUS

CN 2-Oxepanone, homopolymer, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1), hexakis[N-[3-(triethoxysilyl)propyl]carbamate] (CA INDEX NAME)

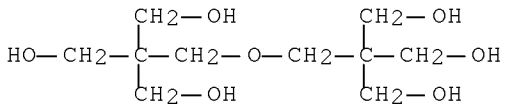
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 126-58-9
CMF C10 H22 O7

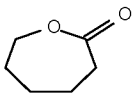


CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

CRN 502-44-3
CMF C6 H10 O2



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|
| Bolze, J | 2001 | 17 | 6683 | Langmuir | HCAPLUS |
| Bolze, J | 2002 | 10 | 2 | Macromol Res | HCAPLUS |
| Clark, D | 1978 | | | Polymer Surfaces | |
| Fleer, G | 1993 | | | Polymers at Interfac | |
| Gibaud, A | 1993 | A49 | 642 | Acta Cryst | HCAPLUS |
| Harmer, M | 1996 | 118 | 7708 | J Am Chem Soc | HCAPLUS |
| Huang, E | 2002 | 81 | 2232 | Appl Phys Lett | HCAPLUS |
| Hwang, Y | 2006 | 510 | 159 | Thin Solid Films | HCAPLUS |
| Kiessig, H | 1931 | 10 | 769 | Ann Phys | HCAPLUS |
| Lee, B | 2005 | 17 | 696 | Adv Mater | HCAPLUS |
| Lee, B | 2004 | 37 | 4174 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 38 | 3395 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 38 | 8991 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 4 | 147 | Nat Mater | HCAPLUS |
| Lee, H | 2002 | 14 | 1845 | Chem Mater | HCAPLUS |
| Lev, O | 1995 | 67 | 22 | Anal Chem | |
| Morais, T | 1999 | 11 | 107 | Adv Mater | |
| Nevot, L | 1980 | 15 | 761 | Rev Phys Appl | HCAPLUS |
| Oh, W | 2003 | 44 | 2519 | Polymer | HCAPLUS |
| Parratt, L | 1954 | 95 | 359 | Phys Rev | |
| Ree, M | 2006 | 16 | 685 | J Mater Chem | HCAPLUS |
| Ree, M | 2005 | 14 | 2 | Phys High Tech (Kore | |
| Rottman, C | 1999 | 121 | 8533 | J Am Chem Soc | HCAPLUS |
| Shin, Y | 2001 | 9 | 100 | Korea Polym J | HCAPLUS |
| Smaihi, M | 1996 | 116 | 211 | J Membr Sci | HCAPLUS |

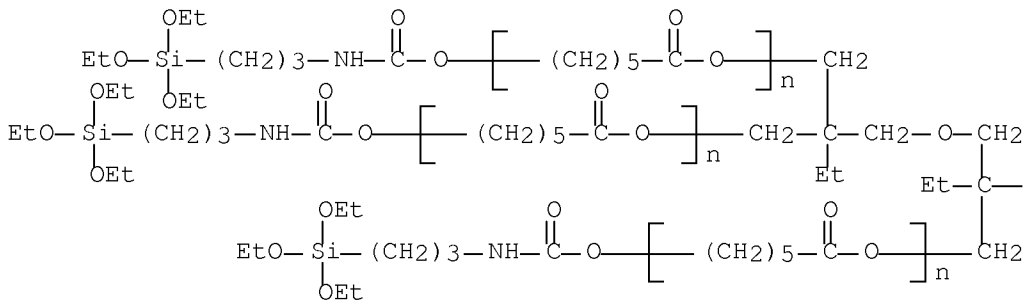
L71 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2006:1027233 HCAPLUS Full-text
DN 147:258557
TI X-ray scattering study of thermal nanopore templating in hybrid films of organosilicate precursor and reactive four-armed porogen
AU Yoon, Jinhwan; Heo, Kyuyoung; Oh, Weontae; Jin, Kyeong Sik; Jin, Sangwoo; Kim, Jehan; Kim, Kwang-Woo; Chang, Taihyun; Ree, Moonhor
CS Department of Chemistry, National Research Lab for Polymer Synthesis and Physics, Pohang Accelerator Laboratory, Center for Integrated Molecular Systems, Polymer Research Institute, and BK School of Molecular Science, Pohang University of Science and Technology (Postech), Pohang, 790-784, S. Korea
SO Nanotechnology (2006), 17(14), 3490-3498
CODEN: NNOTER; ISSN: 0957-4484
PB Institute of Physics Publishing
DT Journal
LA English
AB The miscibility and the mechanism for thermal nanopore templating in films prepared from spin-coating and subsequent drying of homogeneous solns. of curable polymethylsilsesquioxane dielec. precursor and thermally labile, reactive triethoxysilyl-terminated four-armed poly(ε-caprolactone) porogen were investigated in detail by in situ two-dimensional grazing incidence small-angle x-ray scattering anal. The dielec. precursor and porogen components in the film were fully miscible. On heating, limited aggregations of the porogen, however, took place in only a small temperature range of 100-140°C as a result of phase separation induced by the competition of the curing and hybridization reactions of the dielec. precursor and porogen; higher porogen loading resulted in relatively large porogen aggregates and a greater size distribution. The developed porogen aggregates underwent thermal firing above 300 °C without further growth and movement, and ultimately left their individual footprints in the film as spherical nanopores.
IT 945755-96-4
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(X-ray scattering study of thermal nanopore templating in hybrid films of organosilicate precursor and reactive four-armed porogen)
RN 945755-96-4 HCAPLUS
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1), polymer with triethoxymethylsilane (CA INDEX NAME)

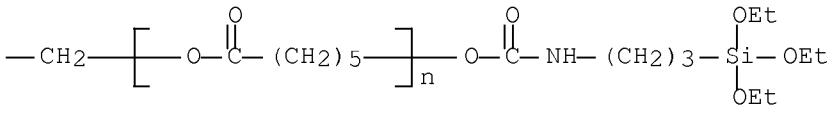
CM 1

CRN 816457-20-2
CMF (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n (C6 H10 O2)n C52 H110 N4 O21 Si4
CCI PMS

PAGE 1-A

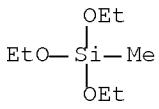


PAGE 1-B



CM 2

CRN 2031-67-6
CMF C7 H18 O3 Si



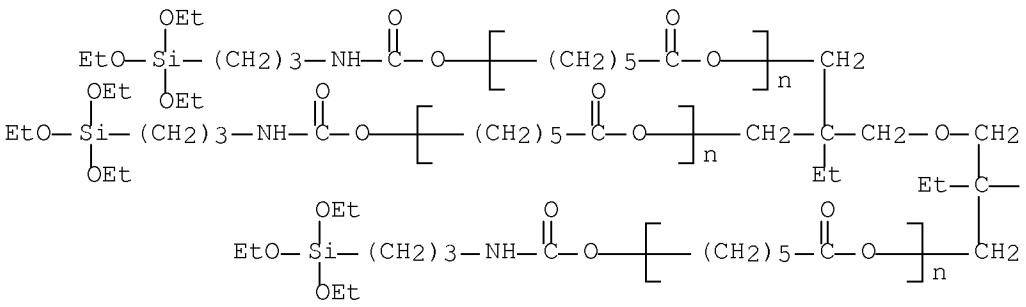
RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|
| Bolze, J | 2001 | 17 | 6683 | Langmuir | HCAPLUS |
| Bolze, J | 2002 | 10 | 2 | Macromol Res | HCAPLUS |
| Czornyj, G | 1992 | 42 | 682 | Proc Electron Comput | |
| Hedrick, J | 1998 | 10 | 1049 | Adv Mater | HCAPLUS |
| Huang, E | 2002 | 81 | 2232 | Appl Phys Lett | HCAPLUS |
| Kim, H | 2003 | 15 | 609 | Chem Mater | HCAPLUS |
| Kinning, D | 1984 | 17 | 1712 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 17 | 696 | Adv Mater | HCAPLUS |
| Lee, B | 2004 | 37 | 4174 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 38 | 3395 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 38 | 4311 | Macromolecules | HCAPLUS |

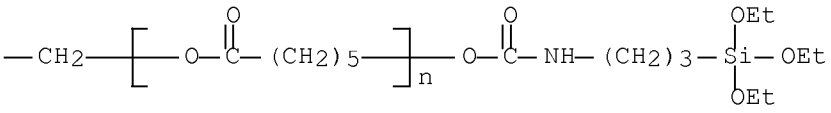
| | | | | | |
|---|---|---|---|---|---|
| Lee, B | 2005 | 38 | 8991 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 4 | 147 | Nat Mater | HCAPLUS |
| Lee, H | 2002 | 14 | 1845 | Chem Mater | HCAPLUS |
| Miller, R | 1999 | 286 | 421 | Science | HCAPLUS |
| Nguyen, C | 1999 | 11 | 3080 | Chem Mater | HCAPLUS |
| Nguyen, C | 2000 | 33 | 4281 | Macromolecules | HCAPLUS |
| Oh, W | 2004 | 20 | 6932 | Langmuir | HCAPLUS |
| Oh, W | 2002 | 203 | 791 | Macromol Chem Phys | |
| Oh, W | 2001 | 371 | 397 | Mol Cryst Liq Cryst | HCAPLUS |
| Oh, W | 2003 | 44 | 2519 | Polymer | HCAPLUS |
| Ree, M | 2006 | 16 | 685 | J Mater Chem | HCAPLUS |
| Ree, M | 1995 | 35 | 215 | Polym Bull | HCAPLUS |
| Semiconductor Industry | 2004 | | | International Techno | |
| Shin, Y | 2001 | 9 | 100 | Korea Polym J | HCAPLUS |
| Young, R | 1991 | | | Introduction to Poly | |

L71 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:1059075 HCAPLUS Full-text
DN 144:7444
TI Scattering Studies of Nanoporous Organosilicate Thin Films Imprinted with Reactive Star Porogens
AU Lee, B.; Oh, W.; Yoon, J.; Hwang, Y.; Kim, J.; Landes, B. G.; Quintana, J. P.; Ree, M.
CS National Research Lab for Polymer Synthesis & Physics, Pohang Accelerator Laboratory, Pohang, 790-784, S. Korea
SO Macromolecules (2005), 38(22), 8991-8995
CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society
DT Journal
LA English
AB In order to minimize aggregation of the star-shaped poly(ε- caprolactone) porogen with four arms in a polyimide (PI)/polymethylsilsesquioxane (PMSSQ) dielec. matrix, it was modified with 3-(trimethoxysilyl)propylamine end-capping. To test the efficacy of the modification, the nanostructures and properties of porous dielecs. prepared using different amts. of modified porogen were quant. characterized.
IT 816457-20-2P 870100-44-0P
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(reactive porogen; effect of reactive modification of star polycaprolactone porogen on nanostructure and properties of imprinted polyimide-silsesquioxane dielec. thin films)
RN 816457-20-2 HCAPLUS
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



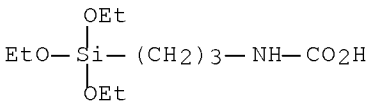
PAGE 1-B



RN 870100-44-0 HCAPLUS
CN 2-Oxepanone, homopolymer, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1),tetrakis[[3-(triethoxysilyl)propyl]carbamate] (9CI) (CA INDEX NAME)

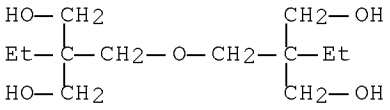
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 23235-61-2
CMF C12 H26 O5

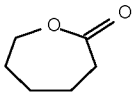


CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

CRN 502-44-3
CMF C6 H10 O2



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|
| Anon | 2001 | | | International Techno | |
| Bolze, J | 2001 | 17 | 6683 | Langmuir | HCAPLUS |
| Bolze, J | 2002 | 10 | 2 | Macromol Res | HCAPLUS |
| Hedrick, J | 1998 | 10 | 1049 | Adv Mater | HCAPLUS |
| Huang, E | 2002 | 81 | 2232 | Appl Phys Lett | HCAPLUS |
| Kim, H | 2003 | 15 | 609 | Chem Mater | HCAPLUS |
| Kim, J | 2005 | 46 | 7394 | Polymer | HCAPLUS |
| Kinning, D | 1984 | 17 | 1712 | Macromolecules | HCAPLUS |
| Lee, B | 2005 | 39 | 3395 | Macromolecules | |
| Lee, B | 2005 | 39 | 4311 | Macromolecules | |
| Lee, B | 2005 | 4 | 147 | Nat Mater | HCAPLUS |
| Lee, H | 2002 | 14 | 1845 | Chem Mater | HCAPLUS |
| Londono, J | 2000 | 33 | 704 | J Appl Crystallogr | HCAPLUS |
| Maex, K | 2003 | 93 | 8793 | J Appl Phys | HCAPLUS |
| Maier, G | 2001 | 26 | 3 | Prog Polym Sci | HCAPLUS |
| Miller, R | 1999 | 286 | 421 | Science | HCAPLUS |
| Morgen, M | 2000 | 30 | 645 | Annu Rev Mater Sci | HCAPLUS |
| Nguyen, C | 1999 | 11 | 3080 | Chem Mater | HCAPLUS |
| Nguyen, C | 2000 | 33 | 4281 | Macromolecules | HCAPLUS |
| Oh, W | 2004 | 20 | 6932 | Langmuir | HCAPLUS |
| Oh, W | 2002 | 203 | 791 | Macromol Chem Phys | |
| Oh, W | 2003 | 44 | 2519 | Polymer | HCAPLUS |
| Pedersen, J | 1994 | 27 | 595 | J Appl Crystallogr | |
| Shin, Y | 2001 | 9 | 100 | Korea Polym J | HCAPLUS |
| Yang, S | 2001 | 13 | 2762 | Chem Mater | HCAPLUS |

L71 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:284667 HCAPLUS Full-text
DN 142:491335

TI Imprinting well-controlled nanopores in organosilicate dielectric films: triethoxysilyl-modified six-armed poly(ε-caprolactone) and its chemical hybridization with an organosilicate precursor

AU Lee, Byeongdu; Oh, Weontae; Hwang, Yongtaek; Park, Young-Hee; Yoon, Jinhwan; Jin, Kyeong Sik; Heo, Kyuyoung; Kim, Jehan; Kim, Kwang-Woo; Ree, Moonhor

CS Department of Chemistry, Pohang Accelerator Laboratory Center for Integrated Molecular Systems and Division of Molecular and Life Sciences, Pohang University of Science and Technology, Pohang, 790-784, S. Korea

SO Advanced Materials (Weinheim, Germany) (2005), 17(6), 696-701
CODEN: ADVMEW; ISSN: 0935-9648

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

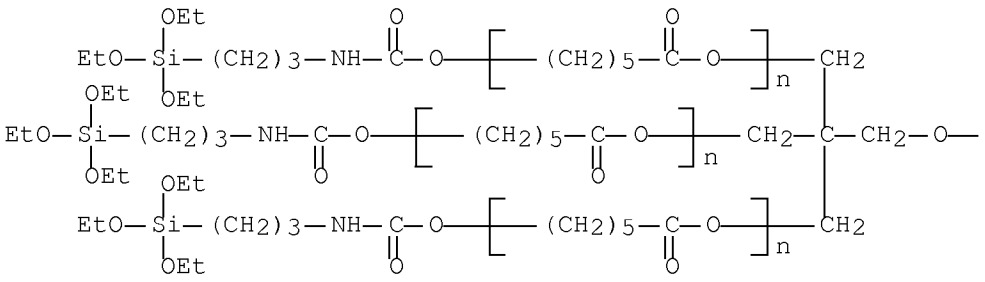
AB A triethoxysilyl-terminated, six-armed poly(ε-caprolactone) porogen is synthesized and the terminal groups are found to significantly reduce the aggregation of the porogen mols. in an polymethylsilsesquioxane precursor via their hybridization reaction with the precursor. The porogen mols. successfully imprint nanopores in the organosilicate dielec. thin film through their sacrificial thermal decomposition Pore size and dielec. constant of the imprinted films are determined

IT 816457-23-5
RL: NUU (Other use, unclassified); USES (Uses)
(porogen; imprinting well-controlled nanopores in organosilicate dielec. films using triethoxysilyl-modified six-armed poly(ε-caprolactone) and its chemical hybridization with an organosilicate precursor)

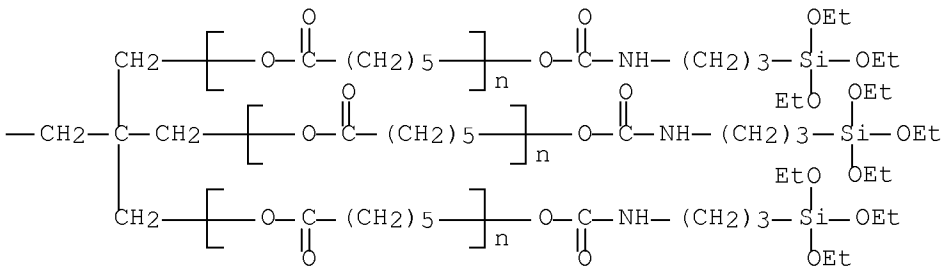
RN 816457-23-5 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|
| Anon | 2001 | | | International Techno | |
| Bolze, J | 2001 | 17 | 6683 | Langmuir | HCAPLUS |
| Bolze, J | 2002 | 10 | 2 | Macromol Res | HCAPLUS |
| Debye, P | 1957 | 28 | 679 | J Appl Phys | HCAPLUS |
| Hedrick, J | 1998 | 10 | 1049 | Adv Mater | HCAPLUS |
| Holy, V | 1999 | | | High-Resolution X-Ra | |
| Huang, E | 2002 | 81 | 2232 | Appl Phys Lett | HCAPLUS |
| Lee, B | 2003 | | | Ph D Thesis, Pohang | |
| Lee, H | 2002 | 14 | 1845 | Chem Mater | HCAPLUS |
| Maier, G | 2001 | 26 | 3 | Prog Polym Sci | HCAPLUS |
| Morgen, M | 2000 | 30 | 645 | Annu Rev Mater Sci | HCAPLUS |
| Nguyen, C | 1999 | 11 | 3080 | Chem Mater | HCAPLUS |
| Oh, W | 2004 | 20 | 6932 | Langmuir | HCAPLUS |
| Oh, W | 2002 | 203 | 791 | Macromol Chem Phys | |
| Oh, W | 2002 | 203 | 791 | Macromol Chem Phys | |
| Omote, K | 2003 | 82 | 544 | Appl Phys Lett | HCAPLUS |
| Parratt, L | 1954 | 95 | 359 | Phys Rev | |
| Pedersen, J | 1994 | 27 | 595 | J Appl Crystallogr | |
| Rauscher, M | 1995 | 52 | 16855 | Phys Rev B | HCAPLUS |
| Shin, Y | 2001 | 9 | 100 | Korea Polym J | HCAPLUS |
| Yang, S | 2001 | 13 | 2762 | Chem Mater | HCAPLUS |

L71 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:182733 HCAPLUS Full-text
DN 142:262689
TI Low-dielectric nanoporous organosilicate polymer composite prepared from precursor of organic/inorganic hybrid polymer
IN Ree, Moonhor; Oh, Weontae; Hwang, Yong-Taek; Lee, Byeongdu
PA Postech Foundation, S. Korea
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2005019303 | A1 | 20050303 | WO 2004-KR2104 | 20040820 <-- |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,

NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

| | | | | | |
|---|---|---|---|---|---|
| DE 112004000058 | T5 | 20050901 | DE 2004-112004000058 | 20040820 | <-- |
| JP 2006515644 | T | 20060601 | JP 2005-518200 | 20040820 | <-- |
| JP 4065291 | B2 | 20080319 | | | |
| US 20060014845 | A1 | 20060119 | US 2005-530815 | 20050408 | <-- |
| PRAI KR 2003-57992 | A | 20030821 | <-- | | |
| WO 2004-KR2104 | W | 20040820 | <-- | | |

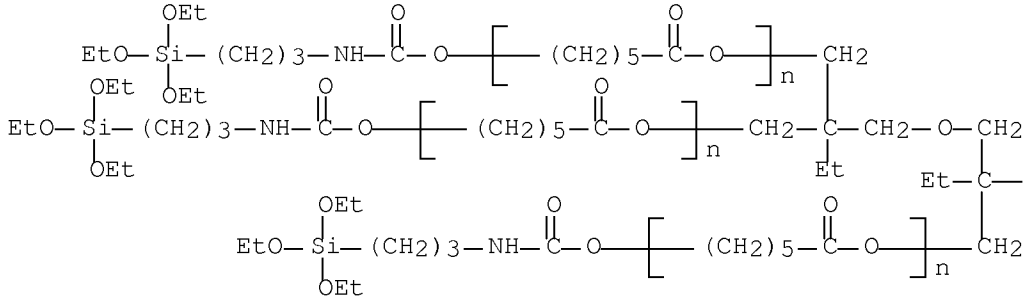
AB The organosilicate polymer composite is prepared by heating an organic/inorg. hybrid polymer in which an organosilicate polymer is chemical bonded to a radial pore-forming polymer ended with a hydrolyzable alkoxysilyl group and used as a core mol. The organosilicate polymer composite film has a very low dielec. constant, and is useful as a dielec. film of the semiconductor device.

IT 816457-20-2P 816457-23-5P 846013-96-5P 846013-98-7P 846014-00-4P 846014-02-6P 846014-04-8P 846014-06-0P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(low-dielec. nanoporous organosilicate polymer composite prepared from precursor of organic/inorg. hybrid polymer)

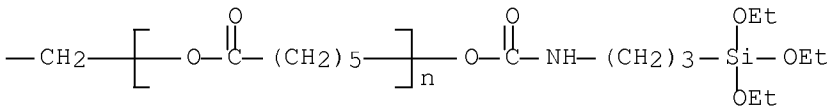
RN 816457-20-2 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



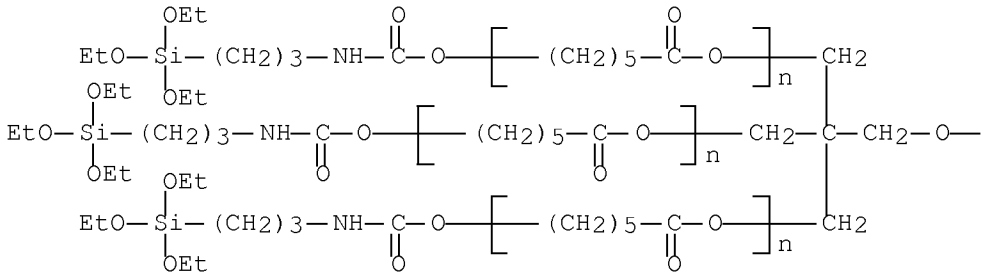
PAGE 1-B



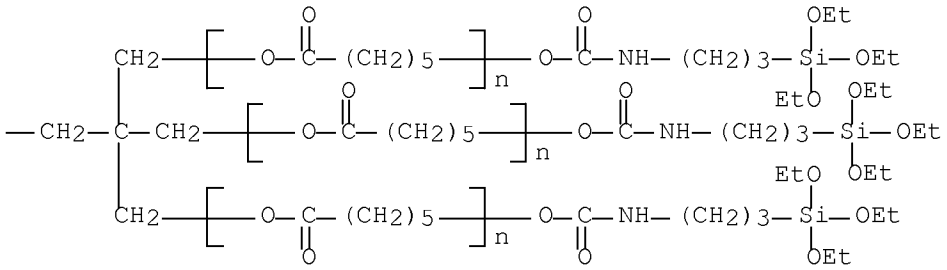
RN 816457-23-5 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (CA INDEX NAME)

PAGE 1-A



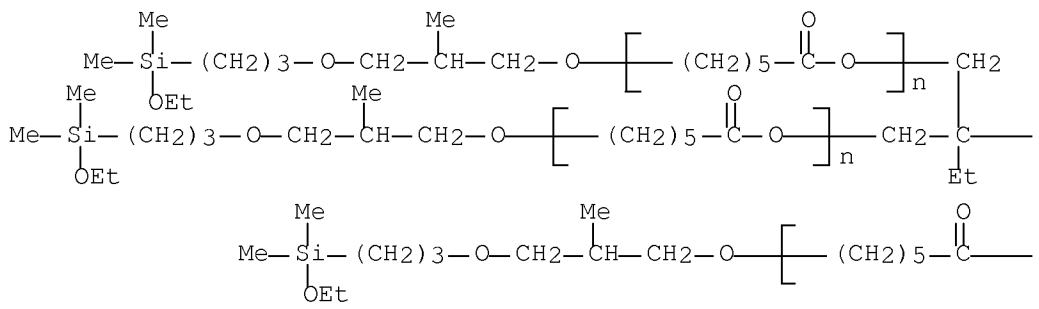
PAGE 1-B



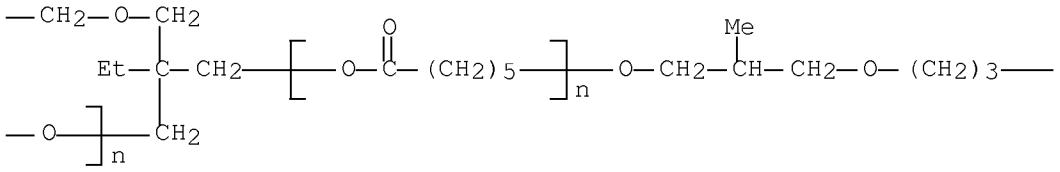
RN 846013-96-5 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(ethoxydimethylsilyl)propoxy]-2-methylpropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)

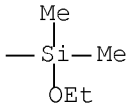
PAGE 1-A



PAGE 1-B



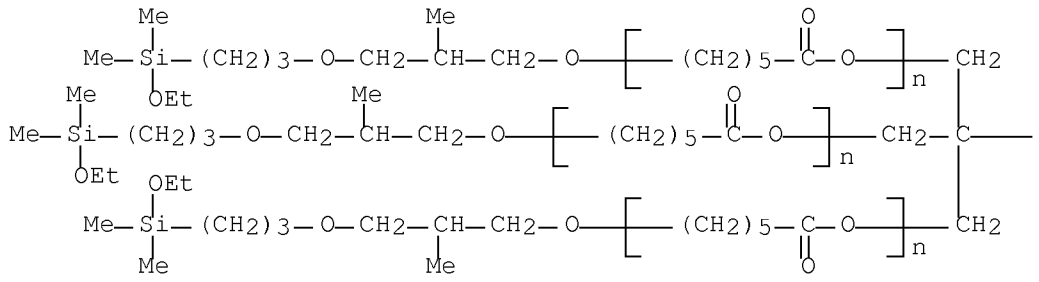
PAGE 1-C



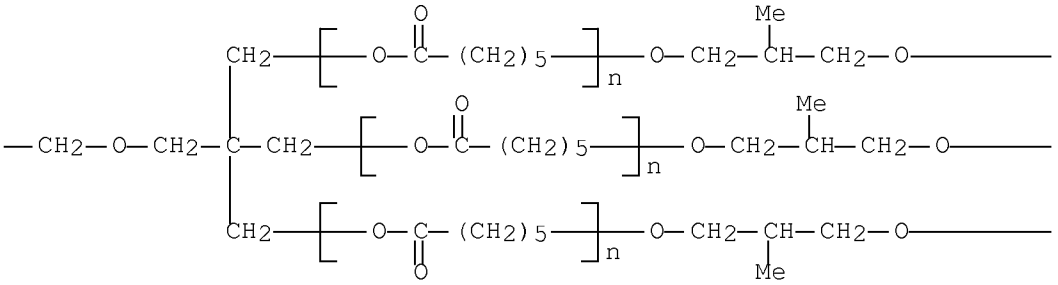
RN 846013-98-7 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(ethoxydimethylsilyl)propoxy]-2-methylpropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (9CI) (CA INDEX NAME)

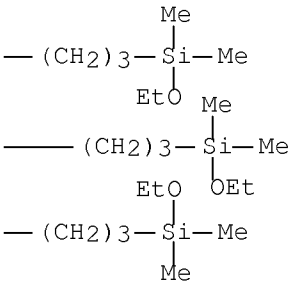
PAGE 1-A



PAGE 1-B



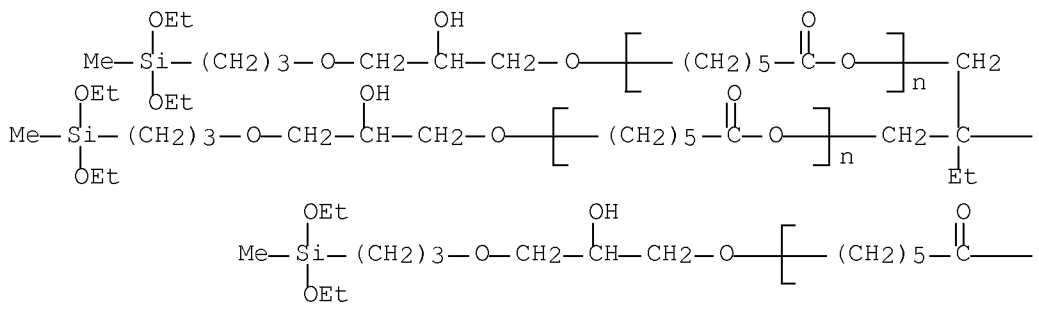
PAGE 1-C



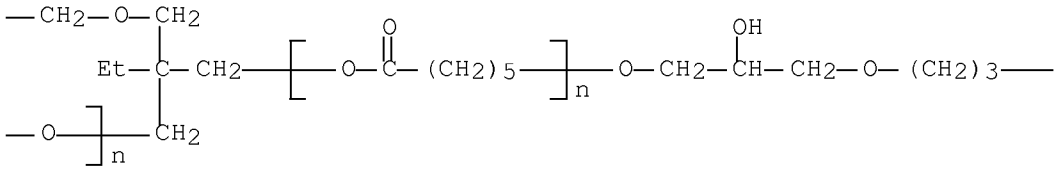
RN 846014-00-4 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(diethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)

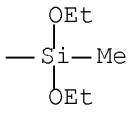
PAGE 1-A



PAGE 1-B



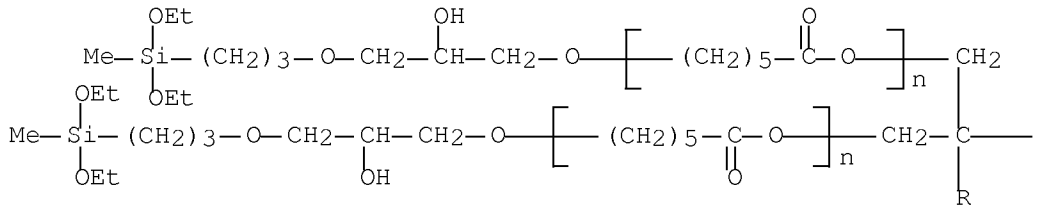
PAGE 1-C

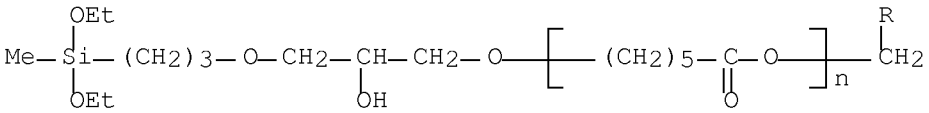


RN 846014-02-6 HCAPLUS

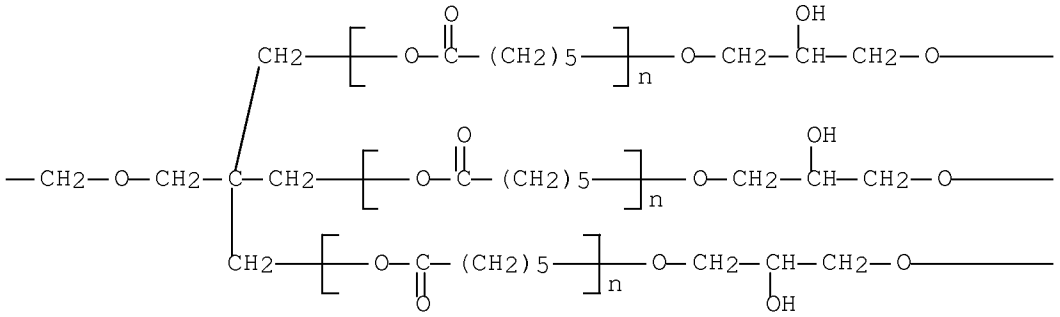
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(diethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (9CI) (CA INDEX NAME)

PAGE 1-A

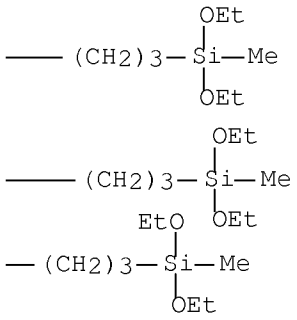




PAGE 1-B



PAGE 1-C

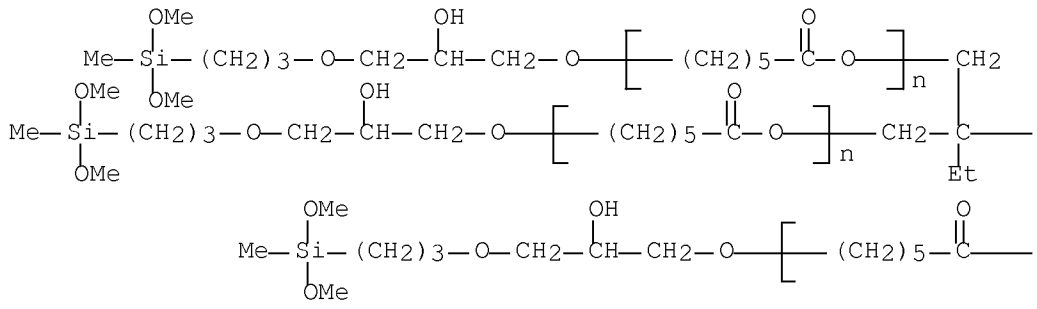


RN 846014-04-8 HCAPLUS

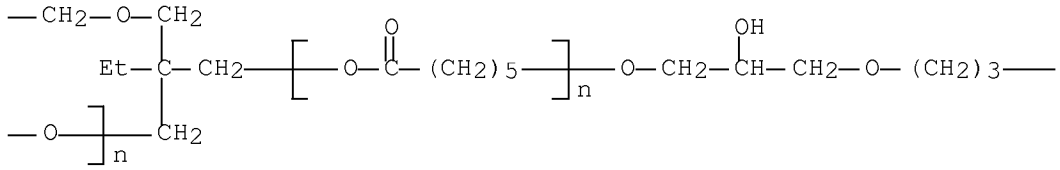
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(dimethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA

INDEX NAME)

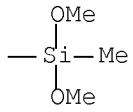
PAGE 1-A



PAGE 1-B



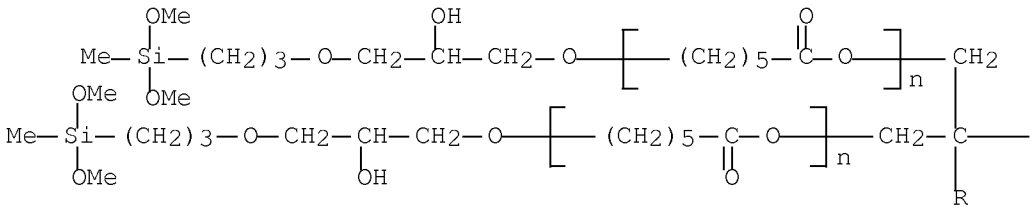
PAGE 1-C

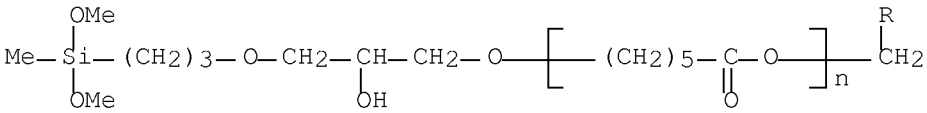


RN 846014-06-0 HCAPLUS

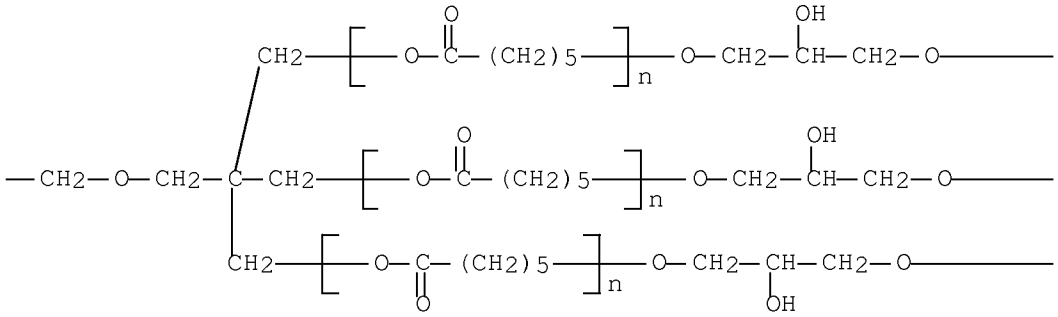
CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[3-[3-(dimethoxymethylsilyl)propoxy]-2-hydroxypropoxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (9CI) (CA INDEX NAME)

PAGE 1-A

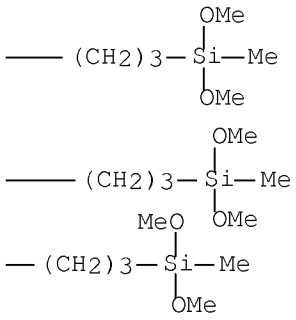




PAGE 1-B



PAGE 1-C



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Du Pont | 1995 | | US 5378790 A | HCAPLUS |
| Honeywell Int Inc | 2002 | | US 6495479 B1 | HCAPLUS |
| Ibm | 2000 | | US 6107357 A | HCAPLUS |
| Lg Chem Investment Ltd | 2001 | | US 20010055891 A1 | HCAPLUS |
| Us Energy | 1987 | | US 4652467 A | HCAPLUS |

L71 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:1154745 HCAPLUS Full-text
DN 142:105484
TI Star-shaped polymer and production of nano-porous low dielectric polymer composite film using the same
IN Ree, Moonhor; Oh, Weontae; Hwang, Yongtaek; Lee, Byeongdu
PA Postech Foundation, S. Korea
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2004113407 | A1 | 20041229 | WO 2004-KR316 | 20040217 <-- |
| | WO 2004113407 | A9 | 20060330 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | KR 2005000831 | A | 20050106 | KR 2003-41384 | 20030625 <-- |
| | DE 112004001135 | T5 | 20060524 | DE 2004-112004001135 | 20040217 <-- |
| | JP 2007520575 | T | 20070726 | JP 2006-515337 | 20040217 <-- |
| | US 20060142504 | A1 | 20060629 | US 2005-561974 | 20051222 <-- |
| PRAI | KR 2003-41384 | A | 20030625 <-- | | |
| | WO 2004-KR316 | W | 20040217 <-- | | |

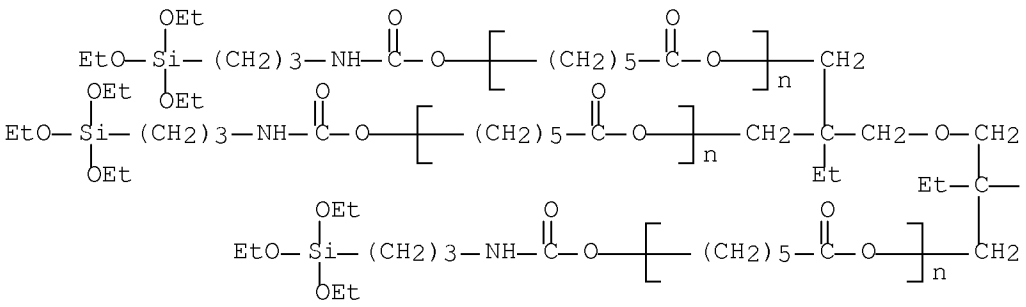
AB A star-shaped polymer having an alkoxy silane end group and containing an ether group at the center thereof is useful as a pore introducer to obtain a low dielec. silicate polymer film having nano-pores distributed regularly and evenly. The star-shaped polymer is prepared by comprising conducting a ring open polymerization of a cyclic monomer and a polyhydric alc., and reacting the resulting polymer with an alkoxy silane compound

IT 816457-20-2P 816457-23-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(star-shaped polymer and production of nano-porous low dielec. polymer composite film using the same)

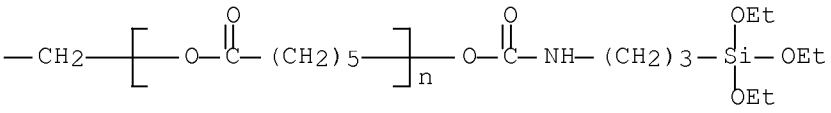
RN 816457-20-2 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



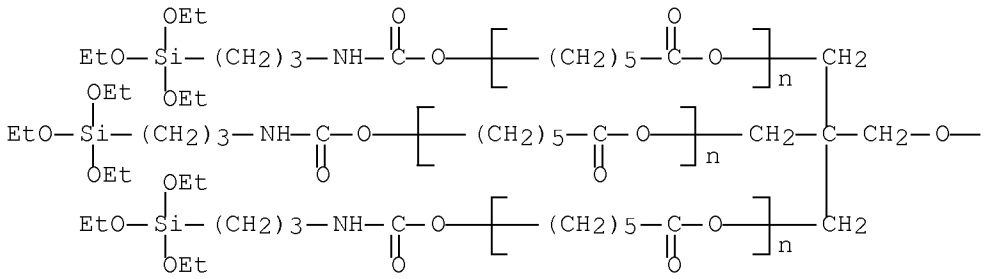
PAGE 1-B



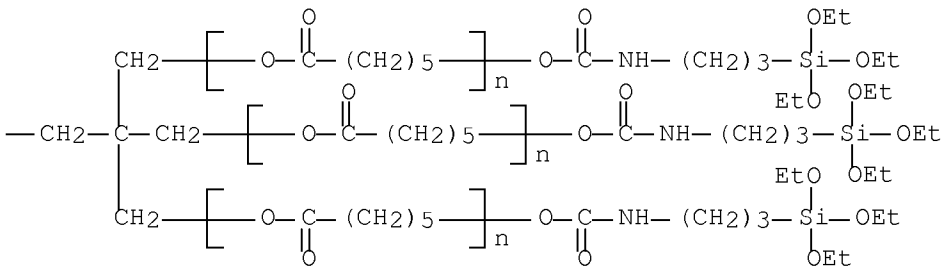
RN 816457-23-5 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] (6:1) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RETABLE

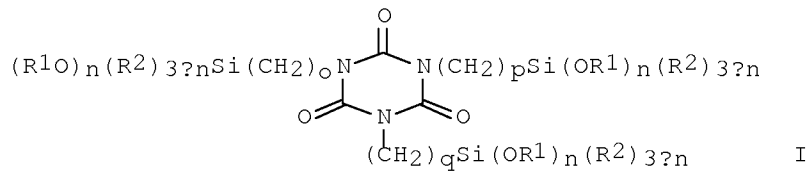
| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|
| Jsr Ltd | 2002 | | | JP 2002167438 A | HCAPLUS |
| Nippon Zeon Co | 1994 | | | JP 06-271772 A | HCAPLUS |
| Shin-Etsu Chemical Indu | 2002 | | | JP 2002268227 A | HCAPLUS |
| Showa Denko Co Ltd | 1996 | | | JP 08-143818 A | HCAPLUS |
| Teijin Ltd | 1992 | | | JP 04-339833 A | HCAPLUS |

=> d l72 bib abs hitstr retable tot

L72 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:428634 HCAPLUS Full-text
DN 142:490130
TI Coating compositions with good hot water and heat moisture resistance for optical fibers
IN Oshio, Atsushi; Saito, Osamu
PA Dainippon Ink and Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2005128304 | A | 20050519 | JP 2003-364640 | 20031024 |
| PRAI JP 2003-364640 | | 20031024 | | |

GI



I

AB The compns. comprise (A) radically polymerizable compds., (B) photopolymn. catalysts, (C) alkoxysilyl compds. containing (c1) I (R1, R2 = C1-5 alkyl; n = 2, 3; o, p, q = 1-10), (c2) alkoxysilyl compds. having ≥2 alkoxysilyl groups and no radically polymerizable unsatd. double bonds prepared by reaction of

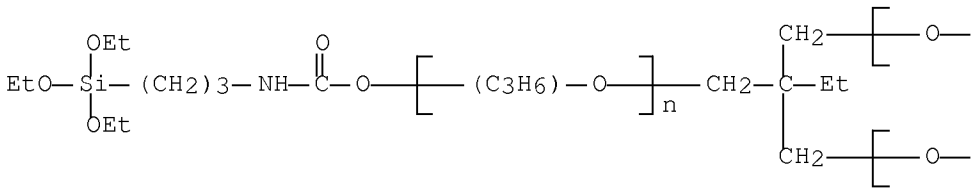
(d1) compds. (mol. weight 50-1200) having 2-10 groups chosen from OH, amino, and mercapto groups and (d2) O:C:N(CH2)mSi(OR1)nR23- n (R1, R2 = C1-5 alkyl; m = 1-10; n = 2, 3), and (c3) alkoxysilyl compds. having ≥2 alkoxysilyl groups and no radically polymerizable unsatd. double bonds prepared by reaction of d1, (d3) polyisocyanates, and (d4) X(CH2)mSi(OR1)nR23-n (R1, R2 = C1-5 alkyl; X = mercapto, amino; m = 1-10; n = 2, 3). The compns. show improved adhesion to glass plates, and are useful as primary coatings for optical fibers with high mech. strength.

IT 851852-18-1
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(coating compns. with good hot water and heat moisture resistance for covering optical fibers)

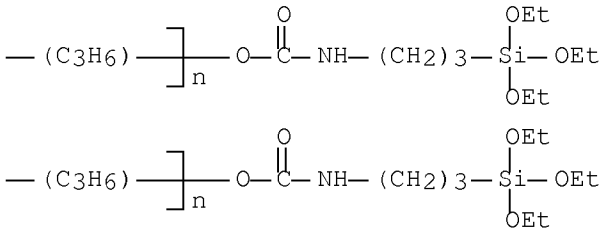
RN 851852-18-1 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L72 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:363784 HCAPLUS Full-text
DN 143:60335
TI Telechelic and star-shaped poly(ε-caprolactone) functionalized with triethoxysilyl groups - new biodegradable coatings and adhesives
AU Kricheldorf, Hans R.; Hachmann-Thiessen, Heiko
CS Institut fuer Technische und Makromolekulare Chemie, Hamburg, D-20146, Germany
SO Macromolecular Chemistry and Physics (2005), 206(7), 758-766
CODEN: MCHPES; ISSN: 1022-1352
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English

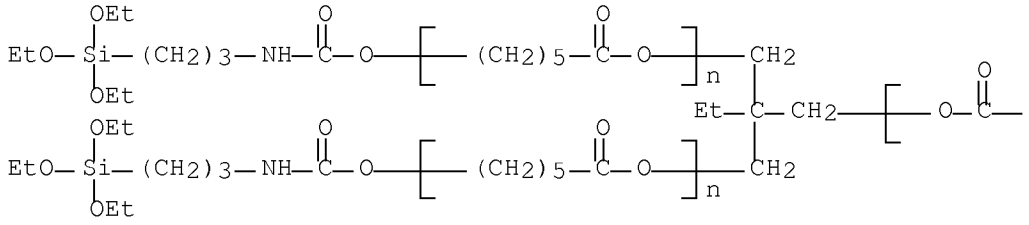
AB Monofunctional poly(εCL) having one CH2OH and one CO2CH3 endgroup was prepared by SnOct2+MeOH-initiated polymns. of εCL at 80 °C. The CH2OH endgroups were reacted with 3-isocyanatopropyl triethoxysilane (IPTES). In this way, poly(εCL) having one CO2CH3 and one TES endgroup was obtained. Poly(εCL) having two CH2OH endgroups were prepared by SnOct2 and Tetra EG or 1,4-butanediol as coinitiators. The mol. weight distribution significantly broadened when the polymerization temperature increased from 80 to 120 °C. The OH endgroups were quant. functionalized by addition of IPTES. Star-shaped poly(εCL)s having three or four OH endgroups were prepared with 1,1,1-tris(hydroxymethyl)propane or pentaerythritol as coinitiators. All endgroups were modified with IPTES. The lengths of the poly(εCL) segments were varied via the monomer/coinitiator ratio. All functionalized oligomers were characterized by 1H NMR spectroscopy and MALDI-TOF mass spectrometry. Preliminary studies of film formation and adhesive properties were performed.

IT 853879-43-3P 853879-44-4P 853904-54-8P
853904-58-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(telechelic and star-shaped poly(ε-caprolactone) functionalized with triethoxysilyl groups with potential use as biodegradable coatings and adhesives)

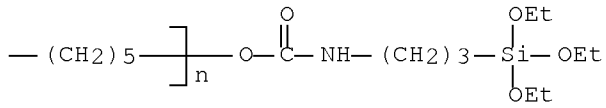
RN 853879-43-3 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

PAGE 1-A



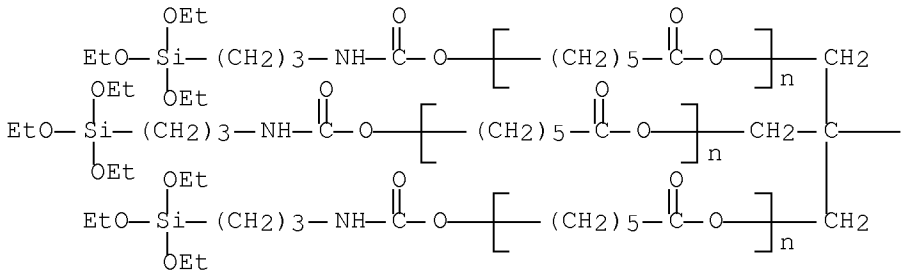
PAGE 1-B



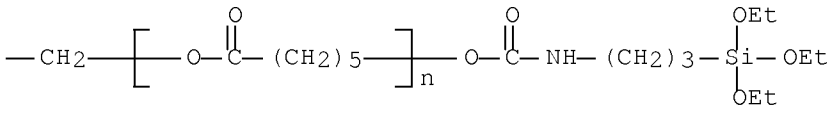
RN 853879-44-4 HCAPLUS

CN Poly[oxy(1-oxo-1,6-hexanediyl)], α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



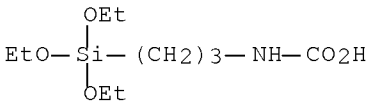
PAGE 1-B



RN 853904-54-8 HCAPLUS
CN 2-Oxepanone, homopolymer, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), tris[[3-(triethoxysilyl)propyl]carbamate] (9CI) (CA INDEX NAME)

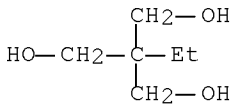
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 77-99-6
CMF C6 H14 O3

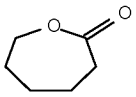


CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

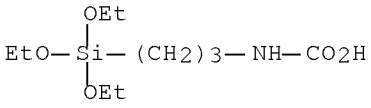
CRN 502-44-3
CMF C6 H10 O2



RN 853904-58-2 HCAPLUS
CN 2-Oxepanone, homopolymer, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1), tetrakis[[3-(triethoxysilyl)propyl]carbamate] (9CI) (CA INDEX NAME)

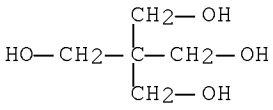
CM 1

CRN 140236-86-8
CMF C10 H23 N O5 Si



CM 2

CRN 115-77-5
CMF C5 H12 O4



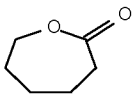
CM 3

CRN 24980-41-4
CMF (C6 H10 O2)x
CCI PMS

CM 4

CRN 502-44-3

CMF C6 H10 O2



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|---|---|---|---|---|---|
| Amann, H | 1972 | | | DE 056729 R | |
| Aoi, K | 2002 | 203 | 1018 | Macromol Chem Phys | HCAPLUS |
| Arcana, M | 2002 | 51 | 854 | Polym Int | |
| Bero, M | 1999 | 200 | 911 | Macromol Chem Phys | HCAPLUS |
| Critehfield, F | 1970 | | | FR 2026274 | HCAPLUS |
| Kowalski, A | 1998 | 19 | 567 | Macromol Rapid Commu | HCAPLUS |
| Kowalski, A | 2000 | 33 | 7359 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 2001 | 2 | 1110 | Biomacromolecules | HCAPLUS |
| Kricheldorf, H | 2002 | 3 | 691 | Biomacromolecules | HCAPLUS |
| Kricheldorf, H | 1999 | A36 | 793 | J Macromol Sci, Pure | |
| Kricheldorf, H | 1998 | 36 | 1373 | J Polym Sci, Part A: | HCAPLUS |
| Kricheldorf, H | 2002 | 40 | 1947 | J Polym Sci, Part A: | |
| Kricheldorf, H | 2001 | 1 | 364 | Macromol Biosci | HCAPLUS |
| Kricheldorf, H | 1998 | 199 | 273 | Macromol Chem Phys | HCAPLUS |
| Kricheldorf, H | 1998 | 199 | 283 | Macromol Chem Phys | HCAPLUS |
| Kricheldorf, H | 1999 | 200 | 1174 | Macromol Chem Phys | HCAPLUS |
| Kricheldorf, H | 1999 | 200 | 1183 | Macromol Chem Phys | HCAPLUS |
| Kricheldorf, H | 2001 | 202 | 2525 | Macromol Chem Phys | HCAPLUS |
| Kricheldorf, H | 2001 | 202 | 2962 | Macromol Chem Phys | |
| Kricheldorf, H | 2002 | 203 | 405 | Macromol Chem Phys | HCAPLUS |
| Kricheldorf, H | 1999 | 20 | 319 | Macromol Rapid Commu | HCAPLUS |
| Kricheldorf, H | 1984 | 17 | 2173 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1988 | 21 | 286 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1991 | 24 | 1944 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1995 | 28 | 6718 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1996 | 29 | 8689 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1998 | 31 | 614 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1998 | 31 | 6403 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 2000 | 33 | 696 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 2001 | 34 | 3517 | Macromolecules | HCAPLUS |
| Kricheldorf, H | 1990 | 32 | 285 | Makromol Chem, Macro | HCAPLUS |
| Kricheldorf, H | 2000 | 41 | 3957 | Polymer | HCAPLUS |
| Majerska, K | 2000 | 21 | 1327 | Macromol Rapid Commu | HCAPLUS |
| Matsuda, T | 2000 | 33 | 795 | Macromolecules | HCAPLUS |
| Messori, M | 2003 | 44 | 4463 | Polymer | HCAPLUS |
| Mizutani, M | 2002 | 3 | 668 | Biomacromolecules | HCAPLUS |
| Moller, M | 2001 | 39 | 3529 | J Polym Sci, Part A: | HCAPLUS |
| Penczek, S | 1999 | 80 | 95 | Polym Mater Sci Eng | HCAPLUS |
| Rafler, G | 1992 | 43 | 91 | Acta Polym | HCAPLUS |
| Sandner, H | 2001 | 22 | 2695 | Biomaterials | |
| Storey, R | 2002 | 40 | 3434 | J Polym Sci, Part A: | HCAPLUS |
| Storey, R | 2002 | 35 | 1504 | Macromolecules | HCAPLUS |
| Storey, R | 1996 | 37 | 626 | Polym Prepr (Am Chem | HCAPLUS |
| Tian, O | 1996 | 37 | 3983 | Polymer | |
| Turunen, M | 2002 | 51 | 92 | Polym Int | HCAPLUS |
| Ydius, J | 2003 | 204 | 171 | Macromol Chem Phys | |
| Young, S | 2002 | 43 | 6101 | Polymer | HCAPLUS |

L72 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:281679 HCAPLUS Full-text
DN 142:356293
TI Environmentally responsive polymeric system for biomedical applications
IN Cohn, Daniel; Sosnik, Alejandro
PA Yissum Research Development Company of the Hebrew University of Jerusalem, Israel
SO U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 20050069573 | A1 | 20050331 | US 2004-845476 | 20040512 |
| IL 2003-155866 | A | 20030512 | | |

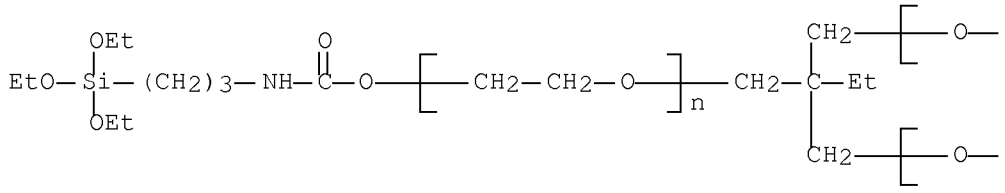
PI US 20050069573 A1 20050331 US 2004-845476 20040512
PRAI IL 2003-155866 A 20030512

AB Title environmentally responsive polymeric system comprises a silicon-containing reactive groups which undergo a hydrolysis-condensation reaction at a predetd. body site and thereby change rheol. and mech. properties of the polymeric system. The polymeric system is useful as a sealant, as a matrix for drug delivery, in the prevention of post-surgical adhesions, and in gene therapy. Thus, 20.2 g polycaprolactone and 1.9 g 3-isocyanatopropyltriethoxysilane were reacted at 80° for 1 h to give a ethoxysilyl-terminated polycaprolactone, which was hydrolysis-condensated to give a test piece with apparent modulus 10.7 MPa.

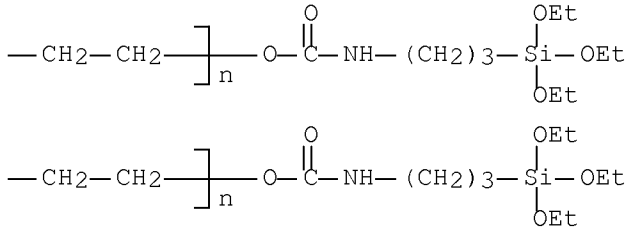
IT 848841-96-3DP, hydrolyzed
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of environmentally responsive polymeric systems for biomedical applications)

RN 848841-96-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-hydro-ω-[[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



```
=> d his

     (FILE 'HOME' ENTERED AT 07:51:26 ON 05 AUG 2008)
                SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 07:51:40 ON 05 AUG 2008
L1             1 S US20060014845/PN OR (US2005-530815# OR WO2004-KR2104 OR KR200
                 E POSTECH/CO
L2          2002 S E3-E12/CO,PA,CS
                 E E7+ALL
                 E REE/AU
L3           281 S E64,E65,E68-E70
                 E MOONHOR/AU
                 E MOON HOR/AU
                 E MOON H/AU
L4            46 S E3,E17
                 E OH/AU
                 E OH W
                 E OH W/AU
L5            77 S E3-E13
                 E OH WEO/AU
L6            23 S E9,E11
                 E OH NAME/AU
L7            11 S E4-E7
                 E WEON/AU
                 E WEONTAE/AU
                 E HWANG/AU
L8             3 S E3
                 E HWANG Y/AU
L9            65 S E3,E19,E20
                 E HWANG YONG/AU
L10           16 S E3,E54,E55
                 E HWANG YONGTAEK/AU
L11           16 S E3
                 E HWANG NAME/AU
L12           14 S E4,E5
                 E YONG/AU
                 E YONG T/AU
L13            7 S E3
                 E YONG TAEK/AU
                 E YONG NAME/AU
                 E YONGTAEK/AU
                 E LEE/AU
L14           41 S E3
                 E LEE B/AU
L15         1826 S E3-E44
                 E LEE BYEONG/AU
L16           12 S E2,E22
                 E LEE BYEONGDU/AU
L17           80 S E3
                 E LEE NAME/AU
L18          307 S E4-E11
                 E BYEONG/AU
                 E BYEONGDU/AU
L19            1 S L1 AND L2-L18
                 SEL RN
```

```
     FILE 'REGISTRY' ENTERED AT 07:57:56 ON 05 AUG 2008
L20          11 S E1-E11
L21           8 S L20 AND PMS/CI AND SI/ELS
L22             STR
L23             SCR 2043
L24          50 S L22 AND L23
L25         930 S L22 AND L23 FUL
                SAV TEMP L25 WINKLER530A/A
L26             STR L22
L27             STR L22
L28             STR L27
L29          50 S (L26 OR L27 OR L28) SAM SUB=L25
L30         864 S (L26 OR L27 OR L28) FUL SUB=L25
                SAV TEMP L30 WINKLER530B/A
L31           0 S L30 AND OCOCOC/ES
L32         120 S L30 AND (OC2 OR OC3 OR OC4 OR OC5)/ES
L33          12 S L30 AND OC6/ES
L34           4 S L33 AND (C6H14O3 OR C5H12O4 OR C12H26O5 OR C10H22O7)
L35          16 S L30 AND (126-58-9 OR 23235-61-2 OR 115-77-5 OR 77-99-6)/CRN
L36          12 S L35 NOT L34
L37           0 S L30 AND C3H6O3
L38          21 S L30 AND (C3H5NO OR C4H7NO OR C5H9NO OR C6H11NO)
L39          23 S L30 AND (NC3 OR NC4 OR NC5 OR NC6)/ES
L40         112 S L30 AND (C3H4O2 OR C4H6O2 OR C5H8O2 OR C6H10O2)
L41          22 S L40 AND 1/NC
                SEL RN 1-5 8 9 18 20-22
L42          11 S L41 NOT E12-E22
L43          15 S L21,L34,L42
L44             STR
L45           1 S L44 SAM SUB=L30
L46          59 S L44 FUL SUB=L30
                SAV TEMP L46 WINKLER530C/A
L47          44 S L46 NOT L43
L48           1 S L47 AND C7H18O3SI NOT NC4-C6/ES
L49           3 S L47 AND (C2H4O OR C3H6O) AND 1/NC
L50          19 S L43,L48,L49
                SAV TEMP L50 WINKLER530D/A

     FILE 'HCAPLUS' ENTERED AT 08:44:43 ON 05 AUG 2008
L51          11 S L50
L52           6 S L51 AND L1-L19
L53           1 S L51 AND PY<=2004 NOT P/DT
L54           1 S L51 AND PY<=2003 NOT P/DT
L55           5 S L51 AND (PD<=20040820 OR PRD<=20040820 OR AD<=20040820) AND P
L56           4 S L51 AND (PD<=20030821 OR PRD<=20030821 OR AD<=20030821) AND P
L57          10 S L52-L56
L58           1 S L51 NOT L57
L59          10 S L51-L58 NOT L1
                SEL RN

     FILE 'REGISTRY' ENTERED AT 08:47:27 ON 05 AUG 2008
L60         104 S E23-E126
L61          25 S L60 AND L25
L62          12 S L61 NOT L50

     FILE 'REGISTRY' ENTERED AT 08:48:40 ON 05 AUG 2008

     FILE 'HCAPLUS' ENTERED AT 08:49:02 ON 05 AUG 2008
```

```
     FILE 'REGISTRY' ENTERED AT 08:51:09 ON 05 AUG 2008

     FILE 'REGISTRY' ENTERED AT 08:51:22 ON 05 AUG 2008
L63          17 S L50 NOT (246255-20-9 OR 335087-97-3)
L64           4 S L50 NOT L43
L65           3 S L64 NOT "(C3H6O)N(C3H6O)N(C3H6O)NC25H56N4O7SI"/MF
L66          17 S L63,L65
                SAV TEMP L66 WINKLER530E/A

     FILE 'HCAPLUS' ENTERED AT 08:53:01 ON 05 AUG 2008
L67           9 S L66
L68           6 S L67 AND L1-L19
L69           0 S L68 AND (PY<=2004 OR PY<=2003) NOT P/DT
L70           2 S L68 AND (PD<=20040820 OR PRD<=20040820 OR AD<=20040820 OR PD<
L71           6 S L68,L70
L72           3 S L67 NOT L71

     FILE 'REGISTRY' ENTERED AT 08:54:37 ON 05 AUG 2008

     FILE 'HCAPLUS' ENTERED AT 08:54:54 ON 05 AUG 2008

=>
```